

[| NODIS Library](#) | [Program Management\(8000s\)](#) | [Search](#) |

NASA Procedural Requirements

NPR 8715.7

Effective Date: May 30, 2008

Expiration Date: May 30,
2013**COMPLIANCE IS MANDATORY**[Printable Format \(PDF\)](#)

Request Notification of Change

 (NASA Only)

Subject: Expendable Launch Vehicle Payload Safety Program

Responsible Office: Office of Safety and Mission Assurance[| TOC](#) | [Preface](#) | [Chapter1](#) | [Chapter2](#) | [AppendixA](#) | [AppendixB](#) | [AppendixC](#) | [ALL](#) |

Preface

P.1 Purpose

This NASA Procedural Requirements (NPR) contains NASA's policy, roles and responsibilities, and safety review process requirements for safeguarding people and resources (including flight hardware and facilities) from hazards associated with payloads that will fly on uninhabited Expendable Launch Vehicles (ELVs) (i.e., ELV payloads), including hazards associated with payload to launch vehicle integration, multiple payloads, and payload-related Ground Support Equipment (GSE). This NPR provides for implementation of Safety and Mission Assurance (SMA) Technical Authority (per NPR 7120.5, NASA Space Flight Program and Project Management Requirements) with regard to safety concerns associated with ELV payload projects. This NPR defines the Agency ELV Payload Safety Program.

Note: The primary focus of the Agency ELV Payload Safety Program is on system safety and medical concerns during the prelaunch phase, during launch through payload separation from the launch vehicle, and during any planned recovery. There are many safety and medical disciplines associated with ELV missions, such as on-orbit or in-flight operations, spacecraft/launch vehicle integration, facility safety, institutional safety, range flight safety, nuclear safety, software safety, human factors engineering, occupational health, and environmental health. Each discipline involved in an ELV payload mission performs functions during various project life-cycle phases and may influence or be influenced by one another. Many of these disciplines and their functions, as they apply to the project life cycle, are defined in, and are subject to the requirements of, other NASA directives (see paragraph P.4 of this NPR). The Agency ELV Payload Safety Program remains cognizant of all safety and medical disciplines associated with ELV payload missions and works to assure they are fully integrated.

P.2 Applicability

- a. This NPR applies to NASA Headquarters and NASA Centers, including Component Facilities and the Jet Propulsion Laboratory (JPL), and contractors/service providers to the extent specified in their contracts with NASA. Unless otherwise specified, the term "Center" throughout the rest of this document is meant to include NASA Component Facilities and JPL.
- b. This NPR applies to uninhabited orbital and uninhabited deep space payloads that fly onboard ELVs (including aircraft assisted ELVs such as Pegasus) and are managed by NASA, whether developed by NASA or any contractor or independent agency in a joint venture with NASA. This NPR does not apply to payloads flown on Space Shuttle or Ares. These NASA launch vehicle programs have vehicle-specific payload safety processes that satisfy the Agency payload safety policy contained in NPR 8715.3, NASA General Safety Program Requirements, and NPR 1800.1, NASA Occupational Health Program Procedures.
- c. This NPR contains requirements that apply to each ELV payload and its design, fabrication, testing, vehicle integration, launch processing, launch, and planned recovery; payload-provided upper stages flown on ELVs;

interface hardware that is flown as part of a payload; and GSE used to support payload-related operations. This NPR does not address in-flight spacecraft operational safety. The mission success and any scientific objectives of the payload are the responsibility of the Payload Project Office and are beyond the scope of this document.

d. This NPR applies to ELV payloads developed under a NASA grant or cooperative agreement (to the extent specified in the grant or agreement) to ensure compliance with Federal, State, and local requirements relating to safety as specified in NPR 5800.1, Grant and Cooperative Agreement Handbook (14 CFR 1260.37), and to ensure that the payload project properly implements the safety requirements pertaining to use of NASA facilities and equipment. (See paragraph 1.3.8 of this NPR.)

e. This NPR does not apply to payloads that will fly on suborbital launch vehicles (such as sounding rockets, balloons, or aeronautical vehicles). Suborbital payloads are subject to the policy and requirements of NPR 8715.3 and applicable local processes and requirements. For example: Suborbital launches conducted by Wallops Flight Facility are subject to the Wallops Range Safety Manual (RSM-2002).

f. This NPR does not apply to non-NASA payloads launched from Wallops Flight Facility where NASA is just providing range services, such as for Department of Defense missions or payloads launched under a Federal Aviation Administration commercial launch operator license. Such missions are subject to the local Wallops Range Safety Process and requirements and the regulations and requirements of the other agencies involved.

g. For existing projects, this NPR applies to the project phases (per NPR 7120.5) yet to be completed as of the effective date of this NPR to the extent determined on a case-by-case basis (see paragraph 2.3.1.n of this NPR).

P.3 Authority

- a. 42 U.S.C. 2473(c) (1), Section 203(c) (1) of the National Aeronautics and Space Act of 1958, as amended.
- b. NPD 8700.1, NASA Policy for Safety and Mission Success.

P.4 Applicable Documents

- a. NPR 1800.1, NASA Occupational Health Program Procedures.
- b. NPR 2190.1, NASA Export Control Program.
- c. NPR 2810.1, Security of Information Technology.
- d. NPR 5800.1, Grant and Cooperative Agreement Handbook (14 CFR 1260.37).
- e. NPR 7120.5, NASA Space Flight Program and Project Management Requirements.
- f. NPR 7123.1, NASA Systems Engineering Processes and Requirements.
- g. NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping.
- h. NPR 8705.6, Safety and Mission Assurance Audits, Reviews, and Assessments.
- i. NPR 8715.3, NASA General Safety Program Requirements.
- j. Air Force Space Command Manual (AFSPCMAN) 91-710, Range Safety User Requirements Manual.
- k. MIL-STD-882, Department of Defense Standard Practice for System Safety.
- l. Range Safety Manual for Goddard Space Flight Center (GSFC)/Wallops Flight Facility (WFF) (RSM-2002).

Note: To address special processes and/or discipline-unique processes, the Office of Safety and Mission Assurance (OSMA) publishes standards that provide specific instructions that are beyond the scope and detail of this document. A listing of applicable Federal requirements, NPRs, and standards can be found in NPR 8715.3.

P.5 Measurement/Verification

Compliance with the requirements contained in this NPR will be verified through processes contained in NPR 8705.6, Safety and Mission Assurance Audits, Reviews, and Assessments.

P.6 Cancellation

- a. This NPR cancels NASA-STD-8719.8, Expendable Launch Vehicle Payload Safety Review Process Standard, dated June 1998.

b. This NPR cancels paragraph 3.13.4.5 of NPR 8715.3, NASA General Safety Program Requirements, in its entirety.

/S/

Bryan O'Connor
Chief, Safety and Mission Assurance

| [TOC](#) | [Preface](#) | [Chapter1](#) | [Chapter2](#) | [AppendixA](#) | [AppendixB](#) | [AppendixC](#) | [ALL](#) |

| [NODIS Library](#) | [Program Management\(8000s\)](#) | [Search](#) |

DISTRIBUTION:
NODIS

This Document Is Uncontrolled When Printed.

Check the NASA Online Directives Information System (NODIS) Library
to Verify that this is the correct version before use: <http://nodis3.gsfc.nasa.gov>
